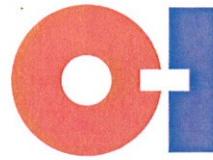


# **EXHIBIT “A”**



Owens-Brockway  
Glass Container Inc.  
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[www.o-i.com](http://www.o-i.com)

May 8, 2008

**Brian T. Stapleton, Esq.**  
170 Hamilton Ave. / Suite 203  
White Plains, NY 10601

**RE: Summary of the Investigations and Analysis  
Eleanor Tedone vs Owens-Brockway Glass Container Inc.**

Dear Mr. Stapleton:

I am currently the Product Safety Manager for Owens-Brockway Glass Containers Inc. (O-B) I received a B. S. in Ceramic Engineering in 1976, from Alfred University, Alfred, NY. I have been employed by Brockway Glass and O-B for 31 years. During my employment I have had various engineering and quality control positions that involved the analysis of bottle failures and bottle imperfections. In my current position, I am responsible for the analysis of consumer and customer related breakage for O-B. I also participate in the evaluation of new bottle designs, the testing of new bottle designs and in the development of the quality criteria used for the production of O-B glass bottles.

I have reviewed the following materials as part of my preparation of this report: All pleadings filed in this case; all discovery demands and discovery responses filed in this case; all photographs exchanged during the aforementioned discovery process; the deposition transcript of the plaintiff, Eleanor Tedone; and the report prepared by Mr. Steven I. Lerman of SIL Consulting Inc., dated April 11<sup>th</sup>, 2008 and captioned "To Explain Various Technical Issues as they Relate to this Case". In addition, I have consulted with Owens-Brockway employees who have extensive, first-hand knowledge of the production processes utilized by H.J. Heinz at its facility in Fremont, Ohio, about the nature and scope of H.J. Heinz's production processes in Fremont. I also have knowledge of the facts established during the April 25<sup>th</sup> 2008 deposition of H.J. Heinz's Michael Fletcher. Based on the foregoing, my training as a Ceramic Engineer and glass fractographer, and my thirty one (31) years of experience working in the glass container industry, I offer the following opinions to a reasonable degree of engineering certainty.

**Review of the Photographs Submitted**

The photographs appear to show a 2.25 oz Heinz Ketchup bottle. Based on the time of the alleged incident and the information provided by H. J. Heinz, the bottle is most likely O-I mold C-8513. This bottle was designed specifically for H. J. Heinz, approved for production in 1990, and is still in production today. All bottles of this type produced by O-B in 2003 and

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2004 were produced at the O-B Crenshaw, PA plant on machine D3. In 2004, the year before the alleged incident, the Crenshaw plant produced over 35 million of these bottles. O-I mold C-8513 was designed specifically for H. J. Heinz. All of the C-8513 bottles produced by O-B in 2003 and 2004 were sold and shipped to H. J. Heinz.

### Manufacturing and Quality Inspection Process at the O-B Crenshaw Plant

The glass bottle manufacturing process at the Crenshaw plant begins with the arrival of the raw materials at the glass plant by rail or truck shipment. After a visual inspection, the raw materials are discharged into the unloading pit. The raw materials are then transported by an elevator to the top of the batch house and discharged into the proper storage silo by the distribution mechanism. The unloading systems are automated to direct the raw material into the proper storage silo.

The various raw materials are proportioned into a "batch" by the weighing scales located under the storage silos. The scales must be accurate to 0.1% (1 lb/1000 lbs.) of the raw materials being weighed. The sensitivity of the each scale is checked daily and calibrated weekly. The raw materials are discharged from the scales onto the gathering conveyor which carries them to the mixer located just above the level of the furnace floor. The mixed batch is transported to the furnace by a hopper car monorail system. The mixed batch is stored in the hopper above the batch chargers until it is needed. The computer controlled batch house at the Crenshaw plant minimizes the potential for unloading and weighing errors.

The batch is fed into the melter portion of the furnace by an automated batch charging system. The amount of glass in the furnace is kept constant at all times. The charging system monitors the level of melted glass in the furnace. If the level of glass in the furnace decreases or increases slightly, the amount of batch being fed into the furnace increases or decreases accordingly. The automated control system controls the depth of the glass in the furnace within  $\pm 0.01$  inch. In the melter portion of the furnace, the batch is heated and melted to form glass. The batch/glass mixture is heated to temperatures in excess of 2700°F to insure complete melting. Statistical Process Control techniques are used to monitor and control furnace operation. The automated temperature control systems allow for the furnace temperatures to be controlled within 5°F.

Once the glass is completely melted it flows from the melter into the refiner and forehearth. In the refiner and forehearth the glass is slowly and uniformly cooled from the melting temperature to the working (gob) temperature of approximately 2100°F. At the end of the forehearth the glass is formed and cut into a gob of glass of that has a specific size and shape. The gob of glass is then cut and delivered to the forming machine. The size and shape of the gob will vary based on the type of bottle being produced.

The Crenshaw D3 bottle forming machine is a blow and blow process individual section (IS) machine. The machine consists of ten individual sections that operate in sequence with each other. The electronic timing of the operation allows for precise control of the

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movements of the various parts and components of the machine. Each of the ten sections of the D3 machine produces two bottles at a time. The entire machine is capable of producing in excess of 350 Heinz 2.25 oz bottles per minute.

The bottle forming process itself consists of two parts. The gob of glass first drops into the "blank side" of the machine where the parison is formed. The parison is a "pre-form" of the bottle that consists of the finish (threaded) portion of the bottle and the general shape of bottle. The parison is then transferred to the mold side of the machine and blown out to the final bottle shape. The bottle is then removed from the mold and set on a cool plate. When the bottle has cooled, it is transferred to the machine conveyor and transported to the annealing lehr.

Quality assurance testing and analysis is an integral part of the continuous manufacturing process. In the forming department, random samples are routinely inspected by machine forming operators before they are transferred to the annealing lehr. In addition to the visual inspections, the forming machine operators subject random samples to statistical process control inspections for bottle weight and general bottle dimensions. The results from the routine forming department inspections are verified by Plant Quality Control Lab personnel once per shift.

The bottles are transferred by conveyor to the annealing lehr. In the annealing lehr the bottles are reheated to temperature above 1050°F. This temperature allows a relaxation of the glass and eliminates any thermally induced stresses that may have been created during the forming of the bottle. The bottles are held at that temperature until the inside of the bottle is equal to the temperature of the outside of the bottle. The bottle is then slowly cooled to room temperature. This cooling process is controlled so that temperature differences between the inside and the outside of the bottle are minimized. The slow cooling process minimizes the amount of residual stress in the bottle from cooling. The temperature profile of the lehr is monitored hourly. In addition to temperature monitoring, representative samples are collected from different locations on the lehr every 2 hours and examined in a Polariscopic Examination of Glass Containers. This process also inspects the bottles for the presence of any significant stress resulting from significant variations in glass composition.

After the completion of the annealing process, all bottles are inspected using fully automated computer controlled inspection devices. In the FP machine, each bottle travels through various stations. In the different stations, the bottle is rotated and reflected light is used to inspect for checks (cracks or fractures in the glass) in different areas of the bottle. The bottom of the bottle is inspected separately for imperfections. There is also a mechanical inspection for inside finish diameter. Bottles that do not meet the inspection criteria are automatically rejected. The equipment continuously documents and reports the number of bottles being rejected by each individual inspection process. The inspection equipment is challenged using actual bottles with imperfections three times per eight hour shift to insure the effectiveness of the inspection equipment.

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Further testing and analysis is also performed on regular and routine intervals on random samples of bottles during production (after exiting the lehr but before packing). The bottles are checked for proper surface treatments every hour. Every two hours, a complete set of bottles is inspected for visual imperfections and critical dimensions. A complete set-out of bottles is also subjected to Thermal Shock testing every eight hours. The testing is based on ASTM C-149-85 (2005) Thermal Shock Resistance for Glass Containers. Glass thickness measurements are conducted on critical areas of the bottle every eight hours.

After containers have passed through the inspection equipment, they proceed to a case packer where they are packed into a cardboard box. The boxes are then transported by conveyor to the palletizing machine. The pallets of cases are then covered with plastic wrap and transported to the warehouse until they are shipped to the customer. Random samples of packed ware are further subject to regular and routine audits during which selected bottles are subjected to complete visual inspection.

The density of the glass being produced is measured and monitored on a daily basis using Statistical Process Control techniques to assure the consistency of glass composition. Other routine checks of glass quality are conducted for stones (solid unmelted particles in the glass) and bubbles.

#### **Comments on the Photographs and Opinions of Mr. Lerman in his report**

The photographs reportedly taken by Mr. Lerman show three (3) large pieces and two (2) smaller pieces of the bottle that were available for him to examine. The pieces depicted represent less than 1/2 of the original bottle. The photographs of the scene of the incident appear to show part of a label that would be present on the sidewall of the bottle. None of the fragments shown in Mr. Lerman photographs correspond to that fragment.

The pieces of the bottle that appear to have been available for Mr. Lerman examination were the finish (threaded) portion of the bottle and most of the neck. The finish area of the bottle appears to be completely intact with the metal closure still on the bottle. The bottom of the bottle also appears to be present in two (2) pieces. From the photos it is not possible to determine what part of the bottle the remaining two (2) smaller pieces were from. Only a small amount of the lower sidewall of the bottle appears to be present. None of the glass fragments from the middle sidewall and upper sidewall and lower shoulder of the bottle appear to be present.

I agree with the statement of Mr. Lerman that "*when glass breaks the fragments often indicate information about the break*". In fact, interpretation of the fracture pattern and fracture markings provide reliable scientific evidence as to the types, directions and magnitudes of the stresses involved in the bottle failure. The fracture pattern and fracture markings also display a history of the propagation of the fracture through the glass. Therefore, from the interpretation of the fracture pattern and fracture surface markings, it is possible to determine fairly precisely, the location of the fracture origin on the bottle and to determine with a reasonable degree of engineering certainty the possible sources and/or

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causes of the fracture responsible for the bottle failure. From the interpretation of the fracture markings it is also possible to determine what fractures were created by the original fracturing of the bottle and what fractures occurred secondary or after the original bottle failure. However, to conduct a thorough and complete analysis of the fracture propagation through a broken bottle, all of the bottle fragments would need to be present. In this case, all of the bottle's pieces were not available for inspection by Mr. Lerman; therefore a thorough and comprehensive analysis such as the one I have described would not have been possible.

The fact that a large amount of glass is missing from the sidewall and shoulder of the bottle would make it impossible to conduct a comprehensive and accurate analysis of the propagation of the fracture throughout the bottle. If multiple fracture origins were present, (such as those created by the dropping a piece of an already broken bottle) it would make it much more difficult, if not impossible, to conclusively determine which fractures occurred from the primary failure and which fractures resulted from secondary damage that occurred after the primary failure.

In his report, Mr. Lerman only states that the failure occurred "in the upper portion of the bottle". He does not provide any detailed information or documentation as to the location of the initial fracture origin on the bottle or how the fracture may have propagated through the bottle. His conclusions as to the location of the fracture are therefore suspect and unreliable. As previously discussed, when glass breaks the fracture leaves a detailed trail as it propagates through the glass. These markings can be easily seen and understood by someone who is familiar with the basics of glass fracture. Mr. Lerman's failure to document in his report the exact location of the fracture origin and how that fracture propagated through the glass bottle, leads me to conclude with a reasonable degree of engineering certainty that the glass fragments present were not sufficient to allow a detailed and reliable fracture analysis, or that the actual fracture origin itself was not present in the fragments he examined.

However, even without the opportunity to examine the missing bottle fragments myself, I can still discuss a number of known facts that contradict the potential causes and or sources for the failure of the bottle proposed by Mr. Lerman and show that Mr. Lerman's conclusions as to the potential causes and sources of the bottle's failure are incomplete, unsubstantiated and unreliable.

As stated by Mr. Lerman, glass bottles of this design are normally very strong and capable of withstanding very significant amounts of stress and load. I agree with Mr. Lerman that the bottle in question should have been capable of withstanding an enormous amount of torque. However, the plaintiff claims that that the bottle failed almost instantly, (within no more than one or two seconds) of her attempting to remove the closure from the bottle. Consistent with her description of events, the photographs exchanged clearly show that the bottle

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closure was still present on the finish (threaded) portion of the bottle after the incident. Therefore, the amount of force / torque that the plaintiff could have applied to the bottle when she tried to open it could only have been extremely low. Therefore, I agree with Mr. Lerman's conclusion that the bottle, when it failed in the manner described by plaintiff, was already very severely weakened.

In his report, however, Mr. Lerman does not indicate that the bottle he examined contained any other manufacturing defect or imperfection other than stress "*induced by improper manufacture or improper anneal*". This is an unsubstantiated conclusion. Mr. Lerman offers no documentation or other proof as to the amount of annealing or other stresses that were present in the bottle. In fact, he provides no evidence that the stress (if it was present) was greater than what is normally present in bottles of this type. He also provided no proof, opinion or insight as to how this alleged stress may have been responsible for the bottle failure.

In his report, Mr. Lerman states that stress breakage can be initiated with much smaller force than would normally be required to break the glass. However, Mr. Lerman does not indicate how it is possible that such a very severely weakened bottle (containing the stress) survived the repeated impacts from routine bottle-to-bottle contact in O-B Crenshaw plant. This is a critical shortcoming, since the bottle in question was certainly subjected to multiple bottle-to-bottle impacts as it was moved down O-B's automated conveyor lines, through O-B's automated inspection equipment and was packed for shipment to H. J. Heinz. These normal bottle-to-bottle impacts create forces of several hundred pounds per square inch (psi) in and on the bottle. Bottles such as these are coated with special lubricity coatings to protect the bottle surface from damage as a result of these impacts. Therefore, it is extremely unlikely that a bottle as very severely weakened as the one at issue in this case could have survived the impacts it received during normal handling at the O-B Crenshaw plant. These are obvious considerations that Mr. Lerman completely fails to address in his report. This failure by Mr. Lerman renders his opinion unreliable and incomplete.

Once the incident bottle was received by H. J. Heinz, it was further subjected to additional repeated bottle-to-bottle contact impacts in the process of being unloaded, depalletized, air-cleaned, filled, shrink- and steam-labeled, packed, re-palletized and shipped. These normal bottle-to-bottle impacts would have also created forces of several hundred pounds per square inch (psi) in and on the bottle. Mr. Lerman did not indicate how such a very severely weakened bottle (containing the stress) would have survived the repeated impacts and other forces that it would have encountered on the H. J Heinz filling line in Fremont prior to filling and after filling. Again, Mr. Lerman's failure to address these obvious facts renders his opinion incomplete and unreliable.

The application of the metal cap to the bottle by H. J. Heinz would have generated stresses in the bottle similar to those that were applied to the bottle by plaintiff. Therefore, if the same stresses that Mr. Lerman claims were responsible for the failure had been present, the very severely weakened bottle would have failed when the metal closure was applied. And, if by some extremely remote chance that it did not fail at the time it was capped, the impacts the

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bottle received during labeling, packing and palletization after it was filled would have caused it to fail. The impacts encountered from routine bottle-to-bottle contact would have been more severe after filling due to the increased weight of the filled bottles. Mr. Lerman's report does not take these factors into consideration.

Even after all of this, the very severely weaken bottle would still have had to survive all of the impacts that it encountered during shipment to the distributor and/or retailer; depalletization at the distributor; shipment to the hotel; and the handling it encountered within the hotel prior to it being taken to the Plaintiff's room. These facts, too, are not discussed or otherwise accounted for by Mr. Lerman.

It is my opinion, based on all of the reasons stated above; that the bottle failure was most likely caused by very severe damage to the bottle sidewall or shoulder. This damage would had to have occurred after the incident bottle left O-B's control and after it was filled and capped by Heinz. In addition, the low level of stress responsible for the bottle failure strongly suggests that the damage responsible for the failure occurred close to the time of failure. It is extremely unlikely that a bottle as very severely damaged bottle as the incident bottle could have survived the types of routine stresses created during normal handling, filling and distribution. The fact that the bottle did not break until Ms. Tedone attempted to open it corroborates and underscores the conclusion that it was damaged just prior to the date of the plaintiff's accident.

There are several possible ways that severe damage could have occurred to the incident bottle before the plaintiff attempted to remove the closure. The incident bottle could have been damaged by the improper handling of the full case of bottles in which it was packed and shipped. If a case of filled bottles were to be impacted against each other or into another solid object, the full force of the impact could readily have been transferred to one bottle or one area of one bottle. If the impact force was high enough, fractures could have been created in bottle sidewall but the impact / fractures may not have been sufficient to cause an immediate failure. The labeling and plastic sleeve on the bottle may have helped hold the broken, cracked fragments of the bottle together. Therefore, the bottle may not have leaked or appeared to be broken. However, when the plaintiff attempted to open the bottle, the fractures associated with the impact damage could have propagated resulting in the bottle failure.

This type of full case handling damage could have occurred in the warehouse where filled goods were stored prior to being shipped. It could have occurred during transportation of the case to the distributor or retailer. It could have occurred when the case of bottles was being handled in the hotel or prior to delivery of the bottle to Ms. Tedone's room.

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**Conclusions:**

For all of the reasons that I have stated in this report I offer the following conclusions, to a reasonable degree of engineering and scientific certainty:

The incident bottle was well-designed, well-made and was safe for its intended and foreseeable use and handling.

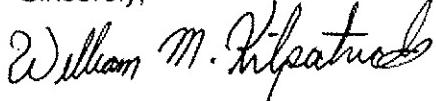
According to plaintiff, the bottle failed during the application of a very minimal force. The bottle is designed to withstand stresses and loads much greater than any the plaintiff could have generated with her bare hands. Since the bottle failed in the face of such a small applied load, a causative factor must have been present (i.e., a "flaw" or "damage") that significantly weakened the bottle. This preexisting flaw that caused the incident bottle to fail was not present in the incident bottle when that bottle was shipped to Heinz by the O-B Crenshaw plant. If such a severe flaw was present when it was manufactured, the bottle would not have been strong enough to survive all of the impacts from the routine bottle-to-bottle contact encountered during inspection packing and shipping process at the O-B Crenshaw plant

Likewise, such a significantly weakened bottle would not have survived the stresses encountered during the capping process or the bottle-to-bottle impacts in the depalletizing, filling, labeling and packing process at Heinz.

It is therefore my opinion, based on a reasonable degree of scientific certainty that the "flaw" in the bottle was created at some point after the bottle was filled and the metal closure applied. The most likely "flaw" would be damage from a hard impact or some other mishandling at some point relatively close in time to plaintiff's accident.

I hereby aver that I have written, read and reviewed the foregoing conclusions, and they are true, accurate and correct to the best of my knowledge, information and belief.

Sincerely,



William Kilpatrick